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Biological & Medical Serials

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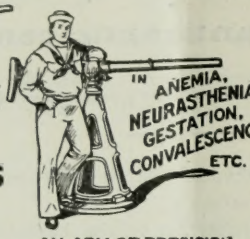

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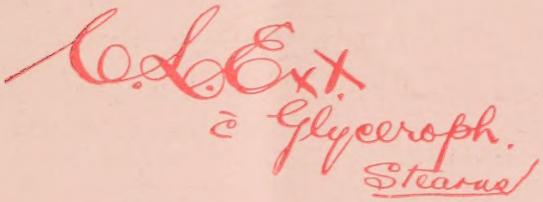

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THE MARITIME MEDICAL NEWS

VOL. XXI., *FEBRUARY, 1909*, No. 2.

Scarlet Fever and Diphtheria.

The January number of the *Practitioner* is devoted entirely to a series of short and interesting studies of scarlet fever and diphtheria, and in view of the prevalence and severity of the last named disease among us at the present time, we give a résumé of these articles.

THE DIFFERENTIAL DIAGNOSIS OF DIPHTHERIA.—It is not difficult to make mistakes in diagnosing diphtheria. Of nearly 7,000 cases certified as diphtheria, and sent to the Homerton Fever Hospital, 17 per cent. were cases of mistaken diagnosis. The great majority of mistakes are made in cases of simple *tonsillitis*, and this is natural, because in the beginning of the disease there is nothing diagnostic in the appearance of the tonsil. But in diphtheria a membrane quickly forms and this is characteristic. Except in cases treated early with antitoxin, a membranous deposit may be looked for on the third or fourth day; if there is not one by that time the case is not likely to be diphtheritic. A soft whitish exudate may be present in tonsillitis, but, if confined to one tonsil, and especially if the fever is slight or absent, diphtheria is to be suspected.

Tonsillitis is painful; pain is not a prominent symptom in diphtheria. If, with tonsillitis there is laryngitis, the case is not likely one of diphtheria.

Vincent's angina, the so-called pseudo-diphtheria, may give rise to error, but the apparent membrane in these cases is a slough. The affection appears to be an ulcerative stomatitis in which the ulcers chiefly affect the fauces and palate. Ulceration is rare in diphtheria and if the material removed is found to be a true slough, diphtheria may be excluded.

Occasionally *scarlet fever* is taken for diphtheria, generally, in those cases in which there is no rash, or in the severe septic forms, when the rash is delayed. In all cases of sore throat one should inspect the trunk for the presence of a rash. When, in diphtheria a rash is present, it is bright red, but not punctate, and it does not peel, and there is no rise of temperature when the rash comes out, which it does usually from the third to the sixth day.

Delirium, common in scarlet fever is unusual in diphtheria. In respect to the throat lesion this, in scarlet fever is wide-spread and ill-defined, and may present ulcers: in diphtheria it is well defined with sharp edges.

Acute septic inflammation of the fauces may be mistaken for diphtheria. In this disease the onset is generally acute and it runs a rapid course with high fever, much constitutional disturbance and marked œdema of the fauces, while diphtheria is frequently insidious in the commencement.

Laryngeal diphtheria may present difficulties. In most cases it is secondary to faucial diphtheria, but when it begins in the larynx it may be difficult to diagnose. The clinical features of diphtheria of the larynx differ widely from the faucial form, and some other cause of dyspnœa or stridor may be suspected. First in

importance is a digital examination: this will exclude the presence of a foreign body, or the pressure of a post-pharyngeal abscess. Some times measles begins with laryngitis, so the inside of the cheeks should be examined for Koplik's spots, diagnostic of measles. In the event of cough a carerul lookout should be kept for pieces of membrane which may be coughed up. It is very important to make an early diagnosis in laryngeal diphtheria as it is especially dangerous. In the case of laryngismus stridulus, error should scarcely occur; the subjects of the disease are generally ricketty children, under two years of age: the spasms of dyspnœa recur, and there may be convulsive movements of the limbs, but in the intervals respiration is easy and the voice unaffected.

It will be evident, in view of the many difficulties in the differential diagnosis of diphtheria, and the gravity of the disease to the individual and to the community that in every case in which it is possible we should have recourse to the most reliable of all methods, bacteriological diagnosis.

THE COMPLICATIONS OF DIPHTHERIA —A large part of our duty in a case of diphtheria is to keep a vigilant lookout for the complications which are so frequent and cause this disease to be so much dreaded. First in importance comes *cardiac weakness*, often developing insidiously and not infrequently showing itself first during convalescence. Post-mortem examination shows that the heart muscle in fatal cases, is affected with granular and fatty degeneration, with loss of striation, and these changes are found also in the muscular layer of the blood vessels of the myocardium. But these changes ,and even in a more severe degree are found in other specific infections in which cardiac failure is not so often met with. The known affinity of the diphtheria antitoxin for nerve tissue has led to a study of the changes in the pneumogastric nerve, and it is found that degenerative changes, indicating severe neuritis are found in it. When in addition to the injury to the heart muscle, the tonic and controlling influence of the pneumogastric nerve is impaired, we may expect not only dilatation and feeble action of the heart, but also alterations in its rhythm. The danger signals then are shortening and weakening of the first sound, insufficient diastole, irregularity and intermission of the pulse, and the "bruit de galop," which points to a loss of control of the nervous mechanism. A rapid pulse with normal or sub-normal temperature is a disquieting symptom, aand the onset of vomiting after heart weakness has developed, is very ominous. In all diphtheria cases the heart should be examined daily, and if cardiac weakness develops, rest in bed should be absolute. Diet should be carefully regulated and any overdistension of the stomach guarded against. The best stimulants are brandy and strychnine, but they should not be administered too soon; rather held in reserve. Digitalis should be used with great caution remembering the muscular degeneration.

Endocarditis and pericarditis are rare complications. Next in frequency to the disorders of the circulation come interferences with the nervous system, these generally manifesting themselves after the acute stage is over, as indicated in the common term "*post-diphtheritic paralysis.*" It is often stated that this condition bears no relation to the severity of the attack, but there can be little doubt that, as in the affection of the heart, so here, the neuritis or degeneration of nerve is proportional to the amount of the

toxæmia. And speaking generally, the gravity of an attack whether as regards the acute stage, or the later sequels of cardiac failure and paralysis, is in direct proportion to the extent and persistence of the exudation. The pathology of the paralysis is apparently the same in the case of the palate or the eye, as in the heart, but the danger to life is much less. Diphtheritic paralysis, apart from cardiac failure, is seldom fatal, is generally confined to the muscles of the palate and the eye, and is as a rule quickly recovered from, rarely lasting more than five or six weeks. Occasionally, the incidence of the paralysis is wider, affecting the limbs, with absence of the knee-jerk, or even implicating the diaphragm. The paralysis affects adults more readily than children and is scarcely ever seen to follow nasal or purely laryngeal diphtheria.

In marked contrast with scarlet fever, the presence of *albuminuria*, even accompanied with hæmaturia, in cases of diphtheria, only indicates a severe grade of toxæmia, and is recovered from as the disease passes off, leaving as a rule, no serious effects. Occasionally complete suppression of urine occurrs, generally accompanied by cardiac failure and vomiting, and ending in death.

The Treatment of Diphtheria.—A fair average of the mortality in diphtheria fifteen years ago, would be 30 per cent. In 1894 the first paper on the antitoxin treatment of diphtheria was read at the meeting of the British Medical Association in Bristol, and a new era in treatment began. A fair estimate of the mortality of the disease at the present day is from 5 to 10 per cent. And few men in active practice will deny that this great improvement is due to the use of antitoxin. There are two or three things to note in connection with antitoxin treatment. The *choice of a serum* is of great importance, and experience must guide us here. There appears to be a wide difference of opinion as to the potency of the preparations now on the market. The result depends largely on the *time* when the antitoxin is used, the best results are invariably seen when the remedy is used early, on the first day if possible. A third point is the *dosage*. The minimum therapeutic dose is from 1000 to 2000 units. But this amount must be greatly increased in many cases if benefit is to be obtained. In children of over a year 6000 units may be given without hesitation if the case is severe or late in having treatment. An injection of 1000 units on the first day may do more good than 4000 units on the fourth day. The remedy may require to be repeated daily for three or four days, or even at shorter intervals. In the Edinburgh City Hospital, Ker has given in a severe case, 60,000 units in all, and others have gone much higher than this. In very severe cases, seen when the disease is well advanced, the antitoxin may be given by intravenous injection, and Ker says he has seen this "act almost like magic in an apparently hopeless case." The so-called sequelæ of antitoxin, viz., a rash, fever and joint pains, need give no anxiety. As to the more frequent occurrence of paralysis after the use of antitoxin, this may be explained by the fact that, under the use of antitoxin so many severe cases, which would have proved fatal in former years, survive through the disease, to the stage in which paresis generally occurs. If the toxin causes the neuritis, the antitoxin can scarcely cause it.

Next to the employment of antitoxin the most important point in treating diphtheria is to insist on the recum-

bent position. "Sitting up should not be allowed on any pretext whatever" (Iker). If the disease has been severe, recumbency should be kept up until the fourth week or longer. Then, if the heart's action is satisfactory, and there is no paralysis most patients may rise with safety, and when two consecutive negative cultures have been taken from the throat, they may be regarded as cured. In the case of adults work should be resumed very gradually. In diphtheria as in other severely toxic diseases, a small allowance of alcohol is often beneficial. Of tonics strychnine is the best. Formic acid is highly spoken of, and Rolleston of the Grove Fever Hospital, London, strongly recommends adrenalin as a prophylactic against cardiac paralysis. He gives ten minims every two hours during the first fortnight, avoiding the administration of brandy and strychnine during the acute stage.

Diphtheria Carriers.—M. Solis-Cohen, of Philadelphia, (see *Journal of American Medical Association*, Jan. 9, 1909) believes that the latent and "carrier" cases are mostly responsible for the spread of diphtheria in cities where the usual precautions are taken as to notification, etc. He gives his own results in the examinations of those who had come in contact with diphtheria, and quotes those compiled by Graham-Smith which correspond fairly well with his own, which showed an average of over 60 per cent. infected. The infected "contact" is, therefore, as great a menace to public health as the convalescent from actual diphtheria. He defines as "latent" diphtheria the condition in which positive cultures are found in persons showing some pathologic condition, local or general, unassociated with pseudomembrane. Some of those cases may possibly be only tonsillitis. The fact that non-virulent diphtheria-like bacilli are found in the mouths of healthy persons complicates the question, but Solis-Cohen thinks that health officials would be justified in demanding bacteriologic tests of those who had been in contact or inmates of the same house or institution with a diphtheria patient, and, if found infected, isolating them till the bacili disappear. But, owing to the possibility of the organisms being non-virulent, inoculation tests should be made when requested on guinea-pigs, and restrictions removed if the animal survives. He has followed this plan in his practice and as medical inspector, whenever possible, since September, 1906, with good results, and relates a number of instances showing its utility.

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School Hygiene. L. H. Gulick, of New York, (*Journal of American Medical Association*, January 2, 1909) insists that the problem of the health of the school children demands special technical skill for its solution, and that school boards should take as much pains to secure such aid as they do in matters of architecture and business details. As instances, he refers to vision and its defects and says that, notwithstanding its importance, there is hardly a school board in America that has in its employ a technical expert to decide on questions of eyesight. This is not alone in its neglect, but he mentions also the unnatural sedentary conditions of school life, the effects of respiratory obstruction by adenoids, enlarged tonsils, etc., on the capacity of the child, the increase of nervous symptoms, the effects of fatigue, of home study, etc., all of which are subjects that properly fall within the class that should be considered by edu-

cational authorities. Until they are thus considered with all the aid that science can give, no contribution of permanent value to physical development will be made, he says, in the field of education. There should be organized under every board of education a department of school hygiene with adequate authority, responsibility and financial support.

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Headaches of Ocular and Nasal Origin. In the *Medical Record* of Jan. 2, 1909, Charles Graef, of New York, refers the production of a considerable proportion of headaches to nasal and ocular conditions. The chief causes of headache from the eyes are congenital hypermetropia and astigmatism. These errors of refraction may not show themselves until something happens to lower the vitality of the system, when the eye-strain appears. One of the causes of cross-eyes is lack of binocular vision. Heredity of malformations is a factor in these abnormalities. A phlegmatic person will get along pretty well with his errors of refraction, while a nervous one will be made very uncomfortable. Pathological conditions of the inner parts of the eye, as the retina and nerve, may cause eye pain and headache. Suggestive signs of these conditions are undue tortuosity of the retinal arteries, increased distinctness of the light streak, alterations in the course and calibre of the veins. Pathognomonic signs are beaded appearance of the retinal arteries, loss of translucency, white stripes of perivasculitis, alternate dilatation and contraction of the veins, and indentation of the veins by the stiffened arteries. In arteriosclerosis the opthalmologist can be of great service to the general practitioner by discovering these deep eye signs. In the nose, irregularities of the nasal septum and turbinals resulting in points of pressure and lesions of the sinuses are most likely to cause headache.

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The Diagnosis of Renal Calculus. In cases presenting the symptoms of cystitis, or lumbago, and which do not respond to the usual treatment for these conditions, we should bear in mind the possibility of some renal condition. The existence of pain referred to the bladder, or to any part of the genito-urinary system, in lesions of the kidney is well known, and the bladder is frequently supposed to be the seat of disease when the lesion is in the kidney. One of the commonest causes of pain of this kind is renal calculus. The diagnosis is now greatly facilitated by the use of modern scientific instruments and methods. New chemical tests, the indigo-carmine test, and cryoscopy, give us more information about the condition of the kidneys than the older tests, but in differentiating lesions of one kidney from another, the separator, the cystoscope and the radiograph are essential. In the *Lancet* of Jan. 2, 1909, there is a valuable article by Dr. David Newman, of Glasgow, on the "surgery of calculus of the kidney," and he dwells particularly on the methods by which the presence of a stone in the kidney is ascertained. The cystoscope is of almost as much value in disease of the kidney as of the bladder itself. The appearance of the ureteral orifice, the appearance and manner of exit of the urine from it, guide us in estimating the condition of the kidney. The use of X-rays in renal calculus is now much more satisfactory than it was a few years ago, owing to improvements in apparatus and procedure, and while there are still difficulties, as for instance, the varying densities of different forms of calculus, it is generally possible to secure a positive radio-

graph, when a stone is present. Dr. Newman shows that, even when pain was referred to one kidney, examination by cystoscope and radiograph may decide that it is the other that is affected, and narrates a case where operation proved that the stone was present in the kidney which was thought to be normal. The danger of operating upon a normal kidney is therefore now much less than it was a few years ago.

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Injuries of the Neck of the Femur in Early Life. Royal Whitman, of New York, in the *Medical Record* of January 2, 1909, says that the distinction between a fracture at the epiphyseal junction and one inch removed from it at the neck of the femur is not always clear to an inexperienced observer. In early childhood and up to ten years of age, the separation of an epiphysis is rare, because the junction is covered with a firm enclosing cartilage reinforced by periosteal tissue. In adolescents the junction becomes relatively weak, and fracture is easier. Injury to the hip in a healthy subject, with immediate disability and physical signs of fracture, is more likely to be a fracture of the neck than an epiphyseal separation. If the symptoms are occasioned by slight injury, and disability is not complete, but is slowly progressive, incomplete epiphyseal fracture is the rule. The patient walks with a persistent limp, and there are shortening of the limb, elevation of the trochanter, and outward rotation of the limb. Motion is free except in abduction. Treatment to be effective must restore the normal contour of the hip. If repair has taken place without treatment, a sufficient wedge of bone must be removed from the base of the trochanter to restore the angle of the neck to the normal. There is great limitation of motion, even partial ankylosis, due to disorganization of this joint. The author gives histories of fourteen typical cases.

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Prevention of Hæmorrhage Nose & Throat Operations. Henry Hubbard Pelton, of New York, has made use of calcium lactate, given for twenty-four hours before operations on the nose and throat, with the effect of lessening the hæmorrhage from the tissues markedly. He gives an account of two cases. The dose for adults is twenty grains three times a day.—*Medical Record*, December 26, 1908.

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Pulmonary Embolism. Following Operations. C. L. Gibson, New York, (*Medical Record*, January 9, 1909) says that since 1899, at St. Luke's Hospital, there have been fifteen sudden deaths from pulmonary embolism. He describes five of these cases. After examining the causes alleged to bring about this condition he dismisses nearly all of them as untenable. There seem to be only three factors that stand out prominently. The age of the patients is usually above forty, when the vessels are beginning to lose their elasticity, which may allow of clot formation in the vessels. Vascular changes are believed to be a prominent factor in their causation. Practically all embolisms occur in operations done below the diaphragm. At present there is little justification for hastening the getting out of bed of patients after operation, in order to lessen dangers of clotting in the veins and resulting embolism.

THE MEDICINE OF SHAKESPEARE.

By G. G. MELVIN
St. John, N. B.

(Read before St. John Medical Society.)

I MAKE no apology for presenting this subject to a scientific society, for, in my feeble way, I have endeavoured to approach it in a strictly scientific spirit. To say this much seems to be necessary, for, were this a literary, or lay, or, perhaps, even a mixed scientific body other than in medicine, some of the extracts I shall be forced to present would hardly be seemly. I may also premise that it is no sudden or extravagant whim that has led me to select this subject—for it has long been my habit, in the course of my reading of the master-mind of all the ages, to succinctly note the references to medical subjects, and it is, mainly, a compilation of these notes that I propose, with your kind permission, to give you to-night. Not that I hold for a moment, that these extracts complete Shakespeare's medical references. I am sure they do not, for sometimes, I am sorry to confess, in my occasional reading the literary interest would so overpower my professional instinct, that I would neglect to record the specific expression.

One more word of personal explanation seems essential. In the Programme my subject was one, though co-related to this, yet not identical with it, and why I have changed it, should, from respect to this Society, be stated. First, it was not because of a desire to choose an easier subject. Poor and insignificant as my literary efforts are, it has never been a matter of labor, but rather recreation, with me, to put a few thousand words upon paper—almost invariably off-hand—but in the present instance the task has been far from the latter and certainly the most laborious I have, almost, ever undertaken. When coupled with this, I remind you that I have already addressed, either this Society, or one of our larger ones, (territorially) upon pretty nearly the identical subject contained in the printed list, I think I have quite amply vindicated my desertion of it, even if I shall fail to make good my attempt at the revised choice.

I shall not pause long, to say much about Shakespeare. All that can be said can be condensed into one descriptive word. Shakespeare was a miracle, and, as such, is quite beyond our little powers to either measure or weigh. Yet something may be noted of our present condition of medicine as compared with its status in his time—and his knowledge of it—for, as, I think, it shall appear a little further on, Shakespeare had, apparently, a most correct and almost voluminous conception of the medical science of his day. The mere mention of science, as applied to the healing art of the sixteenth and seventeenth centuries, may appear incongruous to some, but that, I think, is due to a lack of proper historical perspective. Nothing is more common, especially with us, the latest moderns, than to be short-sighted almost to blindness, with regard to achievements somewhat more or less than a decade old. It would often appear, from the multitudinous self-congratulatory reviews put forth of the medical and surgical conquests of our own times, that we had acquired all knowledge, and that our fathers and ancestors had little or none. Such views are instances of mere historical astigmatism.

In Shakespeare's time, as revealed even by his knowledge they had a very considerable and correct conception of what we might term clinical pathology, and a fairly good working idea of physiology. Concerning scientific therapeutics and minute morbid anatomy they were far behind, but yet, by a more or less rule of thumb method, effected frequent and surprising relief in many acute disorders. It will also appear that they had no very mean grasp of disease-variety. It is beyond doubt that they were, clinically, as familiar, for instance, with malaria as we are, and it is also pretty certain that so far as England was concerned, their practical acquaintance with this disease was far in advance of that enjoyed to-day by the practising English physician. Concerning the more philosophic and metaphysical parts of medical science, as, for example the influence of idiosyncracy and mental impulse, they were, I am led to believe, quite our equals. In attempting to illustrate these remarks, and other phases of our subject by quotations, I shall try to proceed with some method ,though this is quite difficult.

To begin with, I shall quote what would almost appear to be an autobiographical reference to medical practice in general; then we shall proceed to influences acting upon the fetus at the moment of conception, and, generally, pre-natal. References will then follow as to views upon various diseases and pathological and physiological processes, their checks and stimulants, coupled, perhaps, with a glance at one or two widespread beliefs that we can denominate, at present, as nothing but superstition. It is when we come to the natural processes of old age and death, that Shakespeare really attains scientific precision absolutely unsurpassed in matter by the moderns, and still more absolutely unapproached in manner and method of description. Indeed, so strikingly brilliant are some of those passages of observational medicine, that, did many of ourselves possess a like knowledge of the external manifestations of these aspects of morbidity, we would have every cause for congratulation.

Though the number of quotations amount to forty or more, I would appeal to you not to be too disconsolate, as many of them are short and comparatively inconsequential. I shall do no more than indicate the play, unless specially requested. To those who are Shakespearians this will be ample ,to those who are not, a more specific indication would but confuse the memory without rendering any clearer the setting of the extract.

It is of course, impossible to believe that Shakespeare actually practiced medicine, but the following, has, as noted, almost the ring of actual personal narrative:

PERCILES : ACT III : SC. II.

Cerimon:—" 'Tis known I ever
Have studied physic, thro' which secret art,
By turning o'er authorities, I have,
(Together with my practice) made familiar
To me and to my aid, the best impressions
That dwell in vegetives, in metals, stones:
And I can speak of the disturbances
That Nature works, and of her cures: which doth give me
A more content in course of true delight,
Than to be thirsty after tottering honour,
Or tie my treasure up in silken bags
To please the fool and death."

Though we pride ourselves upon our advanced knowledge upon most things, yet there are some questions we have not progressed in to any precise extent. One of these is the influence of pre-natal impression and I think I am not far wrong in saying that for information upon it, we might as well have recourse to the immortal bard as to the most recent writer upon the subject. That such impressions are effective for good or ill, I think the most hard-headed scientist present will scarcely venture to deny. I present three extracts along this line: two on the subject proper, and the third on a still more interesting and, at least, legally-important phase of it.

MID-SUMMER NIGHT'S DREAM: ACT V., SC. I.

Oberon:—To the best bride-bed will we
Which by us shall blessed be,
And the issue there create
Ever shall be fortunate . . .
And the blots of Nature's hand
Shall not in their issue stand,
Never mole, hair-lip or scar
Nor mark prodigious, such as are
Despised in nativity,
Shall upon their children be.

II.—HEN. IV. ACT IV.: SC. III.
(Concerning Jno. of Lancaster)

Falstaff:—Good-faith, this same sober-blooded boy doth not love me, nor a man cannot make him laugh! but that's no marvel: he drinks no wine. There's never any of these demure boys come to any proof, for their thin drink so over-cools their blood that they fall into a kind of male green-sickness and then, when they marry, they get wenches."

The third introduces a subject so profound and yet so obscure that an evening might well be devoted to it. It is certain that, in any large number of instances the eldest child, at any rate, is of a superior capacity, as compared with his younger brethren. Our author goes a step further, and holds that in the yet intenser paroxysm of illicit love, a still more superior being is generated.

KING LEAR: ACT I.: SC. II.

Edmund:— Why bastard? Wherefore base?
When my dimensions are as well compact,
My mind as generous and my shape as true,
As honest madam's issue? Why brand they us
With base? with baseness? bastardy? base, base?
Who in the lusty stealth of Nature take
More composition and fierce quality,
Than doth, within a dull, stale tired bed,
Go to the creating a whole tribe of fops,
Got between sleep and wake."

The following domestic pic ure is one of the most beautiful and true to life capable of being penned. The only pity is, that, in our day, it is so little necessary to be practised, the nursing-bottle and artificial food having almost rendered useless woman's chief physical charm, and the seal of her sex:

ROMEO AND JULIET: ACT I.: SC. III.

Nurse:—For I had then laid wormwood on my dug
Sitting in the sun under the dove house wall; . . . . . .
When it did taste the wormwood on the nipple
Of my dug, and felt it bitter, pretty fool:
To see it techy, and fall out with the dug!

Nothing is more universally acknowledged among us, than the special liability of youth to contagion. It was, evidently, just as well known to our author.

HAM.: ACT I.: SC. III.

Laer: (to his sister) :—And in the noon and liquid dew of youth
Contagious blastments are most imminent.

Here is a list of diseases, not very complete, of course, but yet sufficiently so, and graphic to make us thoroughly certain that pathological nomenclature was far from its infancy in the period under discussion.

TROILUS & CRESSIDA: ACT V.: SC. I.

Theosites:—Now the rotten diseases of the South, the guts-griping, ruptures, catarrhs, loads of gravel i' the back, wheezing lungs, lethargies, cold palsies, raw-eyes, dirt-rotten livers, sciaticas, limekilns i' the palm, incurable bone-ache, and the rivelled fee-simple of the tetter.

. . . . .

In connection with this, and especially with sciatica we can supplement it with the following:

TIMON: ACT III.: SC. I.

Timon:—Thou cold sciatica
Cripple our senators that their limbs may halt as lamely as their manner.

I shall now follow with brief remark, with several quotations mentioning various diseases, as to comment on each at any length would extend this paper very unduly. They refer to the chronicity of (1) senile alopecia, (2) to goitre, (3) to scratching and its effects, (4) to malaria, and (5) to apoplexy.

COMEDY OF ERRORS: ACT II.: SC. II.

Dromio of Syracuse:—"There's no time for a man to recover his hair that grows bald by nature."

GOITRE:

TEMPEST: ACT III.: SC. III.

Gonzalo:—Who would belie . that there were mountaineers dew-lapped like bulls, whose throats had hanging at them, wallets of flesh?

SCRATCHING & ITS CONSEQUENCES:

CORIOLANUS: ACT I: SC. I.

Marcius:—Rubbing the poor itch of your opinion,
Make yourselves scabs.

Malaria is so frequently mentioned in our author, and as occurring in England, that the conclusion is irresistible, as already hinted, that that disease, now nearly unknown there, must have been almost endemic in the 16th century. I shall only trouble you with two examples:

AS YOU LIKE IT: ACT III.: SC. II.

Rosalind:—For he seems to have the quotidian of love upon him.

Again:—

HEN. V.: ACT II: SC. I.

Mistress Quickly:—He is so shaked of a burning quotidian tertian, that it is most lamentable to behold.

The following description of apoplexy, by the most genuinely witty of imaginary mankind is so taking, and, withal, so clinically and etiologically correct ,that it would well serve as a motto for a new text-book on practice:

HEN. IV.: PT. II.: ACT. I.: SC. II

Falstaff (to chief justice) : — This apoplexy, is, as I take it, a kind of lethargy.....a kind of sleeping in the blood, a whoreson tingling, It hath its original from much grief: from study and perturbation of the brain—I have read the cause of its effects in Galen—it is a kind of deafness.

One cannot avoid the conc'usion that Shakespeare had seen more than one case of acute pneumonia, resulting in recovery, before he penned the following:

K. J., Act III.: Sc. IV.

Pandulph:—Before the curing of a strong disease,
Even in the instant of repair and health,
The fit is strongest: evils that take leave,
On their departure, most of all show evil.

Surely nothing could excel this as a clinical picture of lobar pneumonitis, just previous to the stage of resolution.

I wish to introduce just here, a hint as to the treatment of the insane at the period under review. It only consists of a few words, but these are most significant,—even appalling—of the ignorance and brutality of the age, in some directions. As we very well know, the method here glanced at, subsisted in England up to a very recent date; in fact, to the middle of the last century, in many instances—and like many other devilish abuses, was only routed out by the imaginative genius of a great Englishman, Charles Reade, who, in his never-to-be-forgotten novel, "Hard Cash," raised such a storm, that these damnable sinks of devi'try—the private insane asylums, were finally abolished, or placed under proper supervision.

As You Like It: Act III.: Sc. II.

Rosalind:—Love is merely a madness, and, I tell you, deserves as well a dark house and a whip, as madmen do.

However heterodox Shakespeare may be with respect to insanity proper, especially in its treatment, he abundantly shows that he had a very clear and lucid conception of the influence of the mind—the agitated mind—over the body. This is a subject upon which I cannot afford to dwell, as I have, already, a short year ago inflicted my sentiments concerning it, upon you. Listen to this description, and we will more easily understand the good grounds for the remark of that much earlier philosopher who said: "Better is a dinner of herbs with contentment, than a stalled ox and contention therewith." Shakespeare, however, as usual, is more practical and incisive.

Comedy of Errors: Act V.: Sc. I.

Abbess:—Thou sayest his meat was sauced with thy upbraidings:
Unquiet meats make ill digestions:
Thereof the raging fires of fever breed.

Our friends the Christian Scientists, if they read Shakespeare would, I am sure, have to heartily endorse the following:

Ham: Act. II.: Sc. II.

Ham:—There is nothing either good or bad, but thinking makes it so.

This is so short and so aphoristic that it almost necessarily lays itself open to mis-interpretation and gross exaggeration, but our immortal author does not leave the question of mind over matter in any such debatable condition. He returns to it, late in his literary life, after he has become not only an adept in letters, but a very prophet in the sounding of men's weaknesses, not only spiritual but mental and physical. Nothing written has ever excelled, or possibly equalled the following as a description of the power of the imagination, or mind, over the body:

Winter's Tale: Act II: Sc. I.

Leontes:—"There may be in the cup

A spider steeped, and one may drink; depart,
And yet partake no venom: for his knowledge
Is not infected: but if one present
The abhorred ingredient to his eye; make known
How he hath drank, he cracks his gorge, his sides,
With violent hefts."

I suppose I could hardly afford to discuss a question like this without paying tribute to, by quoting, that universally-known speech of the doctor in Macbeth, concerning the uselessness of drugs to allay mental agony, and which results in the principal character of that great drama ordering that "physic be thrown to the dogs, for he would none of it."

MACBETH: ACT V.: SC. III.

Macbeth (to Doctor):—Canst thou not minister to a mind diseased,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,
And with some sweet, oblivious antidote,
Cleanse the stuffed bosom of that perilous stuff
Which weighs upon the heart?

Doct. . . . . Therein the patient
Must minister to himself.

Before I come to Shakespeare's surgery, or illustrations of laboratory methods of diagnosis in his time, one or two instances of superstition, and, finally to his treatment of old age, death and postmortem decay, I shall adduce an item or two respecting his knowledge of the physiology of digestion, on diseased appetite and just a word on a cause of rheumatism. First—digestion—and the office of the stomach:

CORIOLANUS: ACT I. SC. I.

1st. Cit:—What could the belly answer?

Men:—Your most grave belly was deliberate and thus answered:
. . . . .I receive the general food-at first,
Which you do live upon, and fit it is,
Because I am the store-house and the shop
Of the whole body; but, if you do remember,
I send it through the rivers of your blood,
Even to the court, the heart, to the seat of the brain:
And through the cranks and offices of man;
The strongest nerves, and small inferior veins
From me receive the natural competency
Whereby we live.

Every man will acknowledge the truth and aptness of this clinical aphorism.

COR.: ACT I.: SC. I.

Marcius:—A sick man's appetite, who desires most that which would increase his evil.

And those of us subject to rheumatic qualms will confess that Titania knew what she was talking about when she said that

MID-SUMMER NIGHT'S DREAM: ACT II.: SC. II.

Titania:—Therefore the moon, the governess of floods,
Pale in her anger, washes all the air,
That rheumatic diseases do abound.

Two superstitions, that for many centuries very greatly modified medicine and its practice, must be noticed. The first is that very curious one about the mandrake. It deserves a

separate paper for itself, but can only get the recognition of a bare mention here.

ROMEO AND JULIET: ACT IV: SC. III

Jul. . . . what with loathsome smell
And shrieks like mandrakes torn out of the earth,
That living mortals, hearing them, run mad.

The other is quite familiar to all of us, and, in fact has barely died out, almost in our own day. It is that strange and romantic idea that a King's touch would cure the "evil" —the modern struma, scrofula, or tuberculosis of the cervical glands. A little more respectability than usual, however, is attached to this particular instance, for the Sovereign referred to is none other than the celebrated Saint—Edward the Confessor:

MACB. : ACT IV.: SC. III.

Macduff :—What's the disease he means?
Malcolm :—'Tis called the evil,
A most miraculous work in this good King,
Which often since my here-remain in England
I have seen him do. How he solicits Heaven
Himself best knows: but strange-visited people,
All swoln and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures:
Hanging a golden-stamp about their necks,
Put on with holy prayers.

We would be doing an injustice to our ancestors of this time were we to ignore the fact that they practised laboratory methods of diagnosis. The two chief liquid excretions of the body, the spittle and the urine, were then, as now, important criterions, though Koch was yet far back in his ancestor's loins, and Tyson was unknown. The spittle incident, evidently refers either to pneumonitis or phthisis: the inimitable Falstaff declares:

II. HEN. IV.: ACT I.: SC. II.

Falstaff :—I would I might never spit white again.

And he again appears to us in so very modern and matter-of-fact style, that we might well fancy him one of our own somewhat hypochrondcria patients, over-anxious about his internal economy:

II. HEN. IV.: ACT I: SC. II.

Falstaff (to Page) Sirrah, you giant, what says the doctor to my water?
Page :—He said, sir, the water, itself, was a good healthy water: but for the party that owned it he might have more diseases than he knew for—

An answer in the Delphic oracle style that many of us might well imitate often, under like circumstances.

Not even the most partial and enthusiastic admirer of the greatest of literary men, would seriously contend that his knowledge of surgery was profound. Surgery, then, and for a time long after, was the great weakness and reproach of medical practice—it was, itself, the "mere despair" of the patient. While this is true ,it is yet evident that Shakespeare had a fair knowledge of correct surgical procedure as then practised. He certainly thoroughly understood the principle and vital importance of drainage, but I have no time, nor you the patience, to prolong this question beyond simply giving a very few illustrative quotations. Here is one on probing, the name for the instrument being by us restricted to very narrow, and, sometimes, not very respectable uses:

TROILUS AND CRESSIDA:
ACT II: SC. II.

Hector:—Modest doubt is called
The beacon of the wise: the tent that searches
To the bottom of the worst.

Other surgical measures are glanced at, more or less distinctly, in the following:

HAM: ACT III.: SC. IV.

Ham:—It will but skin and film the ulcerous place,
Whiles rank corruption, mining all within,
Infects unseen.

And, again—from the same—

King:—But, like the owner of a foul disease,
To keep it from divulging, let it feed
Even upon the pith of life.

Evidently, from what comes now, our author had, more than once been eye-witness to the awful nerve-racking and soul-harrowing attempts at saving life by major operations upon the unfortunate and sentient patient, strapped to the table which was all too often his death-bed.

HAM: ACT IV.: SC. III.

King:—Diseases, desperate grown
By desperate appliance are r'ieved
Or, not at all.

One more surgical reference, this time a true one, in general, must content us:

II. HEN. IV.: ACT IV.: SC. I.

Archb. . . like a broken limb united
Grow stronger for the breaking.

I cannot refrain from introducing my final division—that upon old age, death and decay, by a quotation from that most masterly of his purely social dramas, Measure for Measure. It is vain to object that it does not refer directly to medical science. Nothing, that profoundly affects the mental status of the patient should be ignored by the physician, and what more grisly or terrific spectre can appear to man than a slavish fear of death. Those who are familiar with Claudio's situation in Measure for Measure, can easily understand how much more horrible the grim reaper would appear to him, in his abounding vitality, than it would to one worn out and depressed by disease. That the extract glances at the monstrous doctrine of eternal torment adds to the interest of lines that are not surpassed by Hamlet's soliloquy upon the life subject:

MEASURE FOR MEASURE:
ACT III.: SC. I.

Claudio (to his sister):—Aye, but to die, and go we know not where:
To lie in cold obstruction and to rot;
This sensible warm motion to become
A kneaded clod; and the delighted spirit
To bathe in fiery floods, or to reside
In thrilling regions of thick-ribbed ice;
To be imprisoned in the viewless winds,
And blown with restless violence round about
The pendant world; or, to be worse than worst,
Of those that lawless and uncertain thoughts
Imagine howling! 'tis too horrible:
The weariest and most loathed worldly life
That age, ache, penury and imprisonment
Can lay on Nature, is a paradise
To what we fear of death.

Shakespeare seemingly knew the whole gamut of life, from conception to the return of the body to its mother Nature, but the accuracy of his observational powers concerning th : decay of vitality even excel his other qualities. What a comfortable reflection for us that he was not doomed in his own body to watch the gradual wasting of his own majestic attributes, but that a kind and compassionate Maker, having dowered the world with him during the maturity of his powers, mercifully took him to Himself before he felt the degrading sting of decadence.

HAM.: ACT II.: SC. II.

Ham. . . Old men have grey beards: their faces are wrinkled : their eyes pouring thick amber and plum-tree gum; they have a plentiful lack of wit, together with most weak hams.

The next again shows us the ever-living Falstaff, not this time as the wit ,but as the subject of it. He was growing old.

II.: HEN. IV.: ACT I.: SC. II

Ch. Jus. (To Fal.) :—Do you set down your name in the scroll of youth that are written down with all the characters of age? Have you not a moist eye, a dry hand a yellow cheek, a white beard, a decreasing leg, an increasing belly? Is not your voice broken, your wind short, your chin double, your wit single, and every part about you blasted with antiquity?

I'm sorry we cannot wait for Falstaff's answer to these charges and his reasons for them. The whole world knows them and always will.

Poor mortality often signals death by delirium, and this, of course, could not escape our author.

KING JOHN: ACT V.: SC. VII.

P. Hen.:—It is too late: the life of all his blood
Is turned corruptibly and his pure brain
(Which some suppose the soul's frail dwelling house)
Doth, by the idle commens that it makes,
Fortell the ending of mortality.
Oh vanity of sickness! fierce extremes
In their continuance will not feed themselves.
Death, having preyed upon the outward parts,
Leaves them, invisible, and his siege is now
Against the mind, the which he pricks and wounds
With many legions of strange fantasies.

Although the following refers to Falstaff's approaching death, and, although, as usual, that hero, disappoints or rather, fools, everybody in sight, and does not die, yet his symptoms, if we may believe that much abused though loving woman, Mistress Quickly, were unmistakable.

HEN. V.: ACT II.: SC. III.

Quick. . . . 'a parted just between twelve and one, even at the turning of the tide: for, after I saw him fumble with the sheets, and play with flowers, and smile upon his fingers ends, I knew there was but one way, for his nose was as sharp as a pen . . . so he bade me lay more clothes on his feet. I put my hand into the bed and felt them, and they were as cold as any stone. Then I felt his knees, and so upward and upward, and all was as as any stone.

I think it not too much to say that if our coroners and official post-mortem examiners committed what fol-

lows to heart, it would be of frequent service. No clearer differentiation between natural and violent death so far as external appearances go, was ever put upon paper, and his elaboration of the signs of violence are absolutely professional in their excellence, and detail.

II. Hen. VI.: Act III.: Sc. II.

Warwick:—See, how the blood is settled in his face.
Oft have I seen a timely parted ghost
Of ashy semblance, meagre, pale and bloodless,
Being all descended to the laboring heart,
Who, in the conflict which it holds with death,
Attracts the same, for aidance 'gainst the enemy,
Which the heart cools, and ne'er returneth
To blush and beautify the cheek again.
But see, *his* face is black and full of blood:
His eye-balls further out than when he lived,
Staring full ghastly, like a startled man,
His hair upreared, his nostrils stretched with struggling;
His hands abroad displayed, as one that grasped
And tugged for life, and was by strength subdued.
Look, on the sheets, his hair, you see, is sticking:
His well-proportioned beard made rough and rugged,
Like to the summer's corn by tempest lodged.
It cannot be but he was murdered here,
The least of all these signs were probable.

We are nearly at the end of our task, but Shakespeare, if anything, is thorough. He was no spiritist, taking note only of the immortal part of men, and ignoring their clay complements. He was himself, though doubly immortal, very very human. He loved the warm living body and all the delights of which it was capable. It is, therefore, not surprising, disagreeable though it doubtless was to him, that he should seek to follow frail flesh even into "the cold ground where the pale form was laid," and expound its passing to us. I do not know how correct his deductions here are, but imagine, they are, as usual, not far wrong.

Ham.: Act V.: Sc. I.

Ham.:—How long will a man lie in the earth ere he rot?

1st Clown:—Faith, if he be not rotten before he die (as we have many pocky corses now-a-days that will scarce hold the lying in) he will last you some eight year, or nine year. A tanner will last you nine year (for) his hide is so tanned with his trade that he will keep out water a great while, and your water is a sore decayer of your whoreson dead body.

MEDICINE OLD AND NEW.

By A. J. COWIE, M. D.,
Halifax, N. S.

(Read before the Halifax and Nova Scotia Branch British Medical Association, January 20, 1908.)

HAVING been requested by telephone from your Secretary to fill a gap in your programme and to name the subject, I, without much thought, said Oh, "Medicine Old and New," and as such it has gone into print. He would indeed be a bold man who would attempt to cover in the short time at his disposal, the ground embraced in the title chosen, so I shall only attempt a slight sketch trusting to your leniency to overlook its disjointed character.

The history of medicine is undoubtedly coeval with the appearance of man on the earth, and just as he made the discovery that he was naked and applied the fig leaves, so when illness came he went to nature and applied the Balm of Gilead. No tribe of savages has been discovered that has not its catalogue of remedies. The earliest records of the human race refer incidentally to the existence, not only of medicine, but of the art of preparing them. In the 30th chapter of Exodus, written probably nearly 1,500 years B. C., is the following injunction: "And thou shalt make it an oil of holy ointment, compounded after the art of the apothecary." That the office of the physician was held in esteem by the Hebrew is gathered from a passage in Jeremiah written about 650 B.C.: "Is there no Balm in Gilead, is there no physician "there ?"

The fabulous history of the early Greeks affords evidence that they also had their materia medica and held the office of the physician in high honour. Melampus, who is supposed to have lived before the Trojan War, about 1,200 B.C., cured the daughters of a King of Argos of mental disorder by means of hellebore, and received as a reward the hand of one of his patients and a third of her father's kingdm. and Aesculapius, who practised the art at a later period, was made a god after his death and had temples erected to his honour.

There is little doubt that the Hebrews and Greeks brought their medical knowledge out of Egypt, as the embalming was the work of the physician and that he did his work well we have ocular demonstration to-day; and I trust his fee was equally ample. In those remote times the list of remedies was meagre and principally for external use. In the cure of internal disorders, as they arose from unseen and mysterious influences, reliance was placed chiefly upon equally mysterious remedies, charms and sorceries, prayers, sacrifices and gifts to avert some supernatural malice or secure the interposition of some health giving deity. This materia medica fell naturally into the hands of the priesthood, so the temples of Aesculapius were the chief resort of the sick, and the priests enjoyed an almost exclusive monopoly of the practice of medicine. The knowledge which they gradually acquired was first made known to the world through the writings of Hippocrates, who studied at one of the Aesculapian temples. He divides the causes of disease into two principal classes, the first consisting of the body, blood, phlegm, yellow bile water, etc., and second of more personal causes such as food, and exercise of the individual. The four fluids of the body, blood phlegm, yellow bile

and black bile were regarded as the primary seats of disease. Health was the result of due combination of these, or crasis, and illness the result of a disturbance of this crasis. His treatment was largely expectant, chiefly attention to diet and regimen and was reproached with letting his patients die by doing nothing. Several medicines which still hold their place were in use, viz.: hellebore, elaterium, scammony, squill, myrrh and that most invaluable one, opium.

After the death of Hippocrates about 370 B.C. until the first century of the Christian era, a gradual accumulation of knowledge took place and different sects arose. The Empirics broke loose and devoted themselves to observation, experiment and induction.

On the other hand the Dogmatics looked with contempt on the humble labours of research. They fell into deserved disrepute. The Empirics starting on a sound basis, undervalued anatomy, neglected the study of disease, and medicine alone absorbed their attention and faith. Hence nostrums, panaceas and secret remedies, to which may be added fraud and self deception. This sect will probably never die as we have abundant proof that it is fully alive in our day. Two of the most famous panaceas held their place for many years: the Mithridate, which contained 54, and the Theriac 60 to 90 ingredients. The latter disgraced the national pharmacopoeia of France as late as 1813.

In the second century of our era appeared two long celebrated authors who embodied in their writings all that was well known of Medicine and Materia Medica. In Celsus "De Medicina" most formulas are for external remedies, poor in virtues but rich in the number of ingredients. Dioscorides devotes himself to pharmacology and mentions or describes some 600 plants. In his time Botany was not yet a science. Chemistry was unknown and, anatomy and physiology were in a rudimentary state. We come then to Galen, the greatest medical name among the ancients, and the one who exerted the most influence on succeeding times. Dying about the close of the second century, when the mental and physical powers of the ancient civilization were falling into decay, his system held sway over 13 centuries during which Western Europe lay almost in the darkness of barbarism, only some feeble glimmerings of science continuing to shine in the musty remnants preserved in the convent libraries. But a new fountain of human energy broke forth in the East, and it is to the successors of Mahomet, who, overrunning Greece, Turkey, Spain, &c., brought with them a revival of ancient learning and medical schools were established in Spain and Italy. They cultivated pharmacy with great zeal, and enjoy the credit of laying the foundations of chemical science. They first brought to our notice the use of senna and nux vomica and used a preparation of mercury and the antimonials.

On the return of the Crusaders with their enthusiastic admiration of Arabic science and the discovery of the art of printing, the human mind of Western Europe awoke with renewed vigour and medicine received its full share of attention. Chemical research was largely directed towards the discovery of the philosopher's stone and the elixir of life, the former to convert everything into gold, the latter to protract human existence to a thousand years. These Alchemists, so called, brought to light numerous mineral compounds which were found useful in disease. The discovery of America added to the immense store-

house of remedies our familiar drugs ipecacuanha, jalap, copaiba, sarsaparilla, guiac, logwood, and last but not least the Peruvian Bark.

The flight of time reminds me that I must hasten on and to bring you nearer home will briefly refer to the state of medicine in England two or three centuries ago, and in this connection cannot do better than quote from published authors of the day. You will see from some of these that the theory of Galen still held sway attributing to medicines the four primary properties of heat, cold, moisture and dryness, which acted on the so-called humours of the body. The belief in Astrology, place and influence of the planets, and charms was prevalent. In a crude way they seem to have hit upon facts, a knowledge of which we are inclined to claim as our very own. In writing of Cephalics or remedies for diseases of the brain, a writer says—"Some are hot, some cold, and as the brain being the seat of reason is by its own nature temperate, therefore if it be a little too hot, sense and reason is inordinately moved, if a little too cold they languish and are stupefied." Certain charms for various ailments were frequently resorted to and firmly believed in. For example, to make children's teeth cut, "Take the tooth of a calf one year old and hang it about the neck." He says "I did this with one of my own children and the very first night three of its teeth cut." A sapphire tied about the neck, so as to touch the region of the heart, preserves the bearer from poison and the plague. Another "A small piece of the naval string of a child newly born, enclosed in a ring, and borne that it touch the skin is a sure and perfect remedy against the colic." Both with ourselves and the patient and friends the question of prognosis arises. I give you a sample and sure method of deciding how a disease will end. "Number the days from the 26th day of June to the day your patient began to fall sick and divide the number by 3. If 1 remain, he will be long sick, if 2 he will die; if none he will quickly recover." The germ of most of the developed ideas and practices of late years can be discovered in these old writers. Hydropathy, the rage a few years ago, is indicated in the treatment for plague. "Another remedy more desperate than this, While natural heat remains, wrap him up naked in a blanket wet in cold water."

The use of our modern anti-toxins and serums is suggested by the following prescription: "The best remedy for the bite of a mad dog; take the liver of a mad dog dried and beaten to powder, a dram at a time is sufficient. For weakness of the lungs; "beat the lungs of a fox into a powder and take a dram of the powder every night or morning." Are we much further advanced in our treatment of consumption so-called, than Dr. Culpepper's prescription? "A most admirable remedy, if not the best for a consumptive, is to go into the country and at plowing time follow the plough, so that the smell of the earth being newly broken up, may be taken in at the nose; if this may not be from the season of the year or poverty of the patient, then let it suffice to go out to a field every morning and dig up fresh turf and smell it for an hour or two together."

The influence of the mind over the body as a preventative and curative agent which is exciting much interest at the present, was recognized as appears from the following from an article on the Plague: "Let such as would avoid this disease, avoid the fear of it, for fear changeth the blood into the nature of the thing feared, the

imagination ruling the spirits natural as is manifest in women's conceptions." Let us hurry on another century and we find the general practitioner was apothecary as well, and to swell his account, as he could only charge for drugs supplied, plenty of medicine and frequent changes left the patient, if he recovered, with a stock of half emptied phials of large size. Venesection was universally practised and was the first remedy employed in all acute diseases. The first meeting of the London Medical Society was held in 1773 and was presided over by Dr. I Lettsom, in whose honour the Lettsomian Lectures were instituted and are still delivered before that body and the general practice of the day as briefly told by a wag who produced the stanza in his honour: "When patients comes to I. I physics, bleeds and sweats em: and if they choose to die, what's that to I I Lettsom."

Coming to the 19th century, the profession embraced the physician holding the highest rank, the surgeon, the apothecary or general practitioner, and chemists and druggists.

The physician was purely consulting at office, and when called by the general practitioner. His terms were strictly cash, one guinea being the smallest. With him the thought of sending in a bill would bring him to the level of the mechanic. I do not know if the public estimation of his abilities was expressed by a saying of the day: "A pair of doctors like a pair of oars, will waft you quicker to the Stygian shores."

The surgeon had risen from his humble origin a barber surgeon and occupied a position little inferior to the physician. The practice of medicine began to assume somewhat of the characteristics of the present day. The study of Botany, Anatomy, Chemistry, Pathology, &c., had developed many new ideas, and the deductive reasoning of the ages led to the discarding from the materia medica a mass of inert remedies, improving pharmaceutical preparations, enabling us to use the active principles instead of bulky crude drugs. In the beginning of the century, Hahnemann, a German physician, started the new school called Homeopathy, "similar suffering" or as expressed in Latin, "Similar similibus curantur" as opposed to an old accepted axiom, "Contraria contrariis curantur." He propounded the dogma that only true and radical cures would be effected by the use of drugs which will cause the same condition. That he was not the originator or first observer of the fact that this was sometimes true, is proved by the writings of Hippocrates, in which he gives several examples of what we call homeopathic cures, among them for the cure of mania, "Give the patient of the root of the mandrake in a smaller dose than sufficient to induce mania," and that the idea was in the public mind earlier than this is suggested by a poet who lived about 400 B.C., in these familiar lines:

"Take the hair it is well written
Of the dog by which you're bitten
Work off one wine by his brother
And one labour with another."

Shakespeare expresses the same maxim in Romeo & Juliet:

"Tut man! one fire burns out another's burning"

and:—

"Take thou some new infection to the eye
And the rank poison of the old will die."

One of his rules was "That only one medicine should be given at once. His belief that all matter was composed of a spiritual as well as material element, and that the spiritual was the true curative part, and its activity developed by reducing the material, led him to the infinitesimal dilutions bringing the doses given to the millionth or billionth drop of original tincture and by repeated triturations to the same proportion of a grain. The reported success of the new treatment in the hospitals induced physicians from all over Europe and America to flock to Berlin, Vienna, &c., and it became the main topic of discussion in all medical centres and its practice was lucrative, being accepted principally by those in high positions and among the wealthy and neurotic.

As the science of medicine is based on truth wherever found, it has absorbed all that was good in this new school. It proved that many diseases terminated favourably spontaneously, that the regulation of the diet and sanitation were important accessories, and simplified the prescription forms for administration.

So much has this absorption occurred, that the name itself as a distinctive practice has almost disappeared. At that date and later, phlebotomy, in all acute diseases, was the first remedy employed, and the public faith in it was so firm that it became a habit with some to call in their physician every spring or autumn to use his lancet. I have personal knowledge of its utility, having a vein in my arm opened at the age of nine for an attack of inflammatory crop. This practice with its allies, cupping and leeching, has fallen into almost entire disuse and to-day he would be a bold practitioner who, even if provided with a lancet, would plunge it into the median vein.

Drifting down the stream we arrive at our own era, and some one parodying the saying that the 19th century was for the United States but the 20th century belonged to Canada, said at the last meeting of the Provincial Medical Society, that the 19th saw the reign of surgery, but the 20th belonged to medicine. The two most prominent ideas in the minds of the medical profession and the laity giving rise to much controversy and speculation are the use of serums and vaccines, and Christian Science or Emmanuel Movement in which many organized churches are taking an active part.

We will consider the latter first: The modern idea of Christian Science or Divine Science, is in some form as old as the human race. The Aesclepiades, a medical priestly caste, dwelt in the temples dedicated to Aesculapius, and thither resorted the halt, the lame, the blind, and many wonderful cures are reported, some of them undoubtedly true, brought about by the strong mental impression and faith of the invalid, that the goodwill of the god and the anoiting of the oil, &c., would be effectual. Hippocrates, wrting many centuries later, recognized the effect of mind on diseases and conditions of the body. This school of therapeutics has in late years come into prominence through the writings of Mrs. Eddy in America under the name of Christian Scientists, and its reported success has caused the subject to be taken up by such an august body as the Anglican Conference, a committee on the subject of ministries of healing, unction of the sick and faith healing being appointed, before which papers on the subject were read and discussed. In the report of that committee, the part in which we as physicians are specially interested, they say, "Undoubtedly in the case

of many of those who have come under the influence of such phases of thought a very remarkable effect has been produced, they have been helped physically and mentally." On the other hand, with reference to such systems as Christian Science, it considers that the claims to heal all manner of diseases and organic troubles has not been substantiated, while suffering was caused, with many deaths, by refusal to allow the sick, children and adults to profit by medical attendance and care. The effects of mental healing are visible as the result of pilgrimage of invalids to Lourdes in France, Knock in Ireland, and St. Ann de Beaupre in Canada, where numerous relics testify to the cures. In England there has been formed a Church and Medical Union to promote the co-operation of the clergy and medical profession. There is to be opened a Home for spiritual healing at which the patient's clergyman will attend and will have several practising physicians as consultants. I do not know what position the profession in Halifax hold, but I take it for granted, few if any, will agree with Mrs. Eddy's proposition, "That nothing is really existing but mind, that the world of things around us is illusion, therefore everything that is not mind can be treated as if it were not." You will perhaps agree with me that the profession have somewhat neglected the study of Psychology, and in its reliance on drugs alone has neglected mental therapy to some extent. I have seen it stated a physician has allowed himself to be used as a bar to a possible criminal prosecution by being present by desire in the room of a patient who was being treated by demonstrations, so-called, by a Christian Scientist, but I trust the report is unfounded. I shall not probably see the end of this modern development, but, judging from the history and character of our profession, it will justify its existence for the benefit of the human race, by appropriating all of it that is found to stand the tests of experience, and so after having enriched our therapeutics disappear with all the schools gone before. The most interesting subject of vaccines and serum therapy was ably discussed in a paper lately read before you by Dr. L. M. Murray, and I shall not enter into the subject further than to say that the broad subject of the relation of plants, animals and man in the transmission of diseases and their action and reaction upon each other, will have to occupy the attention of the astutest minds for many years and many problems will remain unsolved until that day when we are able to understand what is life. On this subject we should keep an open mind and not be led so completely away that if a Dr. Lettsom lived in our day it could be said, "When patients come to I, I with serums will inject em, and if they choose to die, what's that to I, I Lettsom."

Before concluding there is a subject which I shall only touch lightly. Medical ethics does not often arise as a subject for discussion in this Society, but it may not be amiss to observe what advance, if any, we have made beyond the ancients. You are all probably familiar with the oath exacted from medical graduates and known as the Hippocratic. As some among you may not have heard it, I will repeat it: "I swear by Apollo the Physician and Aesculapius, and all the gods and goddesses, that according to my ability and judgment, I will keep the oath and this stipulation: to reckon him who taught me this art equally dear to me as my parents, to share my substance with him and relieve his necessities; If requir-

ed, to look upon his offspring in the same footing as my own brother's, and to teach them this art without fee or stipulation. I will follow the system of regimen which, according to my judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel, and in like manner I will not give to a woman any means to produce abortion. With purity and holiness I will pass my life and practice my art. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further, from the seductions of females. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad, I will not divulge. While I continue to keep this oath inviolated may it be granted to me to enjoy life and the practice of the art respected by all men, but should I trespass and violate this oath, may the reverse be my lot."

This oath you see covers all the moral obligations of a physician to himself, his brethren and the public, and it behooves us living in this Christian era to see that we at least fall not short of the standard raised by those of our profession in so-called heathen times.

SUBMUCOUS RESECTION OF THE NASAL SEPTUM.

By A. E. DOULL, M. D.
Halifax, N. S.

(Read at meeting of Halifax and Nova Scotia Branch British Medical Association, Dec., 1908.)

NASAL respiration, as we all know, is the proper form of breathing. It is something that each individual should desire, and we as practitioners, should see that all our patients have it, in-so-far as it is in our power, for numerous cases of bronchial and pulmonary trouble are brought on by the lack of proper nasal respiration.

I do not intend to speak at length on this subject, but when there is lack of sufficient nasal respiration, there is always an underlying cause, which in the majority of cases can be removed.

Obstructions are many, and among the commonest are deviations of the septum, either to one side or the other, or to both, high up or low down. The septum, in the last few years especially, has had a great deal of attention pain to it, on account of its tendency, from developmental or traumatic causes, to obstruct the free passage of air into the lungs, and, after much discussion and practical work, and after the trying of one operation and then another for the removal of these obstructions, at the present time the submucous resection of septal deformities is extremely popular. It is an old method, but in a simplified form is successful in the majority of cases.

For a moment let us glance at the septum and the parts that enter into its construction, as by doing so we will be better able to follow the steps of the operation, and see the advantages of the instruments which are used in its performance.

The septum is both cartilaginous and bony. The bony portion consists of the perpendicular plate of the ethmoid, the vomer, and the crests of the superior maxillæ and palate bones; the cartilaginous portion is the quadrangular plate, which is anterior. Over the bone and over the cartilage we have the periosteum and the perichondrium, and over all a fairly thick layer of mucous membrane.

As I said before, the obstruction may be on one side or the other, or on both. It may be formed by one part of the septum, or by parts of the whole.

You have noticed hat I have spoken of *obstructions* formed by the septum, because we see many cases of deviated septa and spurs on the septum which do not obstruct, and with these we have nothing to do, because our object in operating is not to straighten septa, but to remove obstructions.

All obstructions, whether high up or low down, should be corrected. The low ones do damage by impeding nasal respiration, and the high ones by pressing on the middle turbinates and so preventing the drainage from the accessory sinuses.

And now we will proceed to the operation itself. No general anæsthetic is required, as a rule, but a solution of cocaine, 5 per cent. with hemisine 1-2000 is what is used to produce the desired anæsthesia. First spraying the mucous membrane with a cocaine solution of about 2 per cent. and then waiting a minute or two, we

are the better able to anæsthetize the mucous membrane wih the other solution with less discomfort to the patient. Pledgets of absorbent cotton soaked in the aforementioned so'ution are laid on the septal mucous membrane in both sides on practically its whole extent. These are left in for twenty minutes at least, after which we are prepared to go ahead.

With the patient, preferably, in the upright position, with a specially devised knife, one simi'ar to the one I here demonstrate, an incision is made through the mucous membrane and perichondrium about three-quarters of an inch long, and not too far back, say about a quarter of an inch from the skin and mucous junction; then with an elevator placed beneath the perichondrium and on the cartilage, the muco-perichondrium is elevated on the side of the incision. This part of the operation requires time, patience and care, for by undue pressure the elevator may puncture the cartilage and mucous membrane of the opposite side, a thing to be avoided as I shall show later on. One may get between the mucous membrane and the perichondrium and separate these two layers; this is very tedious and a difficul thing to do, yet it is sometimes done, one thinking meanwhile that one is in the right p'ace; but the separation of the periosteum and perichondrium is a remarkably easy thing to accomplish, and, if time is taken at the start to place the elevator correctly, much needless manipulation of the parts is done away with, and time saved, both to operator and patient. There are cases where a previous periostitis or perichondritis has existed, and in these it sometimes is a difficult matter to separate the layers which are bound down by fibrous adhesions.

Having one side finished we reach another step in the operation where one must not act too hastily or roughly, namely, the going through the cartilage so that the muco-perichondrium of the opposite side may be elevated. Some use a sharp, small curette and slowly scrape a small area until the perichondrium is exposed, others use the knife, making a bevelled incision and then working through with a blunt elevator until satisfied that it is in the correct position. Always watch the end of the elevator, as it can be followed readily most of the time in its journey beneath the muco-perichondrium.

When satisfied that the mucous membrane is elevated sufficiently on both sides, one takes an instrument that keeps the two mucous surfaces apart and away from the cartilage, and with a Ballinger swivel knife, (here shown) remove the quadrangular cartilage, always leaving a small bridge as a support to the nose. With bone forceps, complete the work, removing whatever bone is in the way. Then, with the same forceps, fracture the crests of the maxi'læ and the palate bones and remove these. This is necessary to allow the mucous membrane to fall back in the middle line, like a curtain.

The operation is now complete. There is no need of suturing the wound, as it heals with remarkable rapidity, and on the following day it is often hard to detect the site of the incision.

Simson's sponges are inserted in each side, wrapped in cargile membrane, or oil silk lubricated with birchloride-vaseline. These swell within a short while and exert pressure on the two membranes, preventing the formation of hæmatoma, and the membrane will adhere the quicker. These plugs are removed after twenty-four hours and, as a rule, there is no necessity of replacing them, but the cavities are left expos-

ed to th air and cleansed dai'y wi h a mild alkaline solution.

The advantages of this operation over some of the others are: (*a*) The time of healing is reduced by weeks over the Gleason or Asch method which are only good for certain forms of obstruction whereas the sub-mucous resection method will answer in nearly every case. (*b*) There is practically no raw surface left; (*c*) No splints are required; (*d*) The whole of the mucous membrane is retained when obstructing spurs are removed in this way and healing is only a matter of days instead of weeks.

Some of the more common accidents are; (*a*) perforation of the anterior part over the site of the incision, especially when attempting to go through the cartilage to get beneath the perichondrium of the opposite side. This is not a serious condition and could be overcome by suturing one side of the wound immediately after the operation, but should it persist the cosmetic effect is bad and ulceration with crus' formation may continue for some time and the patient may whistle through the nostril during respiration, which is decidedly ann ying. (*b*) Laceration of the mucous membrane is not an uncommon accident and if it happens it delays the healing considerab'y. (*c*) Infection may take place, with rise of temperature and chills. (*d*) Falling in of the bridge of the nose has been watched for very carefully in these cases and does not show itself for some time after the operation. Not many cases are reported, but it has happened and is usually due to too much cartilage being removed. These deformities can be overcome later on by the skillful subcutaneous injection of paraffin.

INCREASE OF ECTOPIC GESTATION IN OUR TIMES.

A Theory as to Its Causes.

By P. C. MURPHY, M. D.
Tignish, P E. I.

(Read at the meeting of the Prince Edward Island Medical Society, August, 1908.)

THE unnatural condition of a misplaced ovum in its impregnated state is nothing new in the pathological history of the human species. This anomaly was described as far back as the Eleventh Century; but it was not until within the last twenty-five years that it arrested the attention of our profession as a common occurrence.

Physicians of the present time are prone to contend that the increase in our day is only apparent, averring at the same time that this abnormal pregnancy always obtained in a considerable number of cases, but, owing, they say, to the lack of adequate diagnostic facilities, it was not appreciated.

For my part I beg to dissent entirely from this view, and on the following grounds:—

We are accustomed, and with good reason, to regard our medical predecessors as acute observers, and for the most part finished diagnosticians, men who, relying on a keen sight, a delicate touch and a comprehensive intellect, managed to ascertain macroscopically and classify diseases in a manner which we, in many cases, cannot surpass although we can avail ourselves of results worked out *micro*scopically by a laboratory expert. Now, it requires no microscope to diagnose the majority of cases of Tubal Gestation that we meet to-day; and in this fact we have a strong argument against the contention that it occurred with equal frequency in the past,—that the increase in the last twenty-five years only proves our superior knowledge of Obstetrics.

In proportion as we recognize the analytic and philosophic minds of the older surgeons, who assisted, perhaps, at as many autopsies as we do, we shall be inclined to the belief that had this diseased condition existed they would have given it as well-defined a place in the literature of their day as it has in our own. That they have done so is prima facie evidence that they were not familiar with it; and it makes it only fair to conclude that ectopic gestation happened but rarely, if at all, in the past centuries, thus forming a striking contrast with its frequency at present.

Men like Lawson Tait, Martin of Berlin, Schauta of Vienna, and others across the water, and on this side, Boldt, Price, Lapthorn Smith, or our own Murdoch Chisholm with fifteen successful operations to his credit, have so familiarized us with this pathological phenomenon that it may be said to be placed in the region of the common-place to the latter-day physician.

But how are we to account for the frequent occurrences that have made the case so well known to us? Medical men have conjectured, as etiological factors, the ordinary theories of constriction, and strictures, and what not, in the reproductive roads and by-paths owing to diseases from

within and without. But this explanation is unsatisfactory for the simple reason that these causes and conditions existed long ago almost to the same degree as in recent years without having produced the effect now ascribed to them. Where, then, are we to look for the cause of the alarming increase under our civilization? To my mind it is not far to seek. I am persuaded that ectopic gestation as we meet it nowadays may be attributed to these preventives of conception which have been the instruments of "Race suicide" of the past fifty years.

The ordinary syringe is still the chief safe-guard (save the mark!) of the ordinary woman who is not yet proficient in the art, or who has not yet, through his venality, secured the services of her family physician.

Given the relaxation of the tissues, following the natural orgasm, with a syringe bulb against a flaccid os; the well directed stream of water, and you have the proper physical conditions for driving semen and ovum to an unnatural place for impregnation, and the unnatural fluid with it likely to produce spasms, or contractions, not to say inflammatory conditions that will prevent its return to the natural habitat for development. Then there is the effect of this, and other preventives, on the engorged, but unsatisfied appetency of the reproductive system,—perhaps the most sensitive in our nature—and the affront and demoralization to the nervous system whose wonderful pshychological impress wields such a potent influence in the reproduction of the race, of which we know so little. Other devices for attaining the same bad end might be noted, but I have indicated sufficiently what I conceive to be the real cause of the remarkable frequency, as compared with the past, of ectopic gestation at the present time. It is observed too that a case of extra-uterine pregnancy is quite extraordinary in isolated communities like our own, which are as yet unsophisticated and consequently free from the baneful practice abovementioned.

Much more might be said; but this paper is already too long. I have written it merely to invite consideration and discussion of an important subject. All cannot agree on a debatable question; and I suppose this one is no exception; but we are all of one mind regarding the prevalency, and the repulsiveness of the crime to which I refer. We all remember too how the Creator chastised the first man who first committed it as recorded in Holy Scripture; and though you may disagree with my view as to its being the cause of ectopic gestation, you will readily allow, nay, stoutly maintain, that it is our duty as medical men to point out to the misguided practisers of this pernicious habit that the Almighty's punishments are yet as a condign as in the days of Onan, that offences against nature usually bring a revenge, and that they may be surprised at any time to find themselves in a condition from which only the efforts of our modern surgery acting promptly can free them.

CORRESPONDENCE.

Dr. MacKay's Reply to Dr. Mader on "Hospital Organization."

EDITORS MARITIME MEDICAL NEWS:

SIRS:—Dr. Mader has taken up six columns of the last issue of your journal abusing myself primarily, two of my colleagues secondarily and blowing his own horn, thirdly.

It is not my custom to answer low, scurrilous attacks as they invariably come from persons not worth noticing, but in view, however, of the importance to this province of having the provincial hospital well organized and equipped and up-to-date in every respect, I may be permitted to make a few observations.

I never attacked the hospital in the public press unanimously or otherwise, re the Lively or Mackenzie cases. When Dr. Mader says I did he states what is not true. These two cases would, in themselves, destroy the reputation of any institution.

Dr. MacLean, of Shubenacadie, preferred charges against the hospital for the treatment his patient, Lively, had received there, not I, and the medical board of the institution never exonerated the medical men directly interested in the case, although it had a chance to do so if it desired. In connection with this case I simply did my duty as a member of the Medical Board. It is true I helped to keep Dr. Mader off the hospital staff. I intend to do so still.

The man Knowles never was a patient of Dr. Hogan, but he was a private patient of mine, and as such I attended him with Dr. Kirkpatrick at the request of his (Knowles) wife and friends. The patient was suffering from a "cerebellar abscess" and not "an obscure abscess in the region of the mastoid," and he died of acute spreading oedema which had set in at least two days before I first saw him.

I was not aware that Dr. Chisholm was accused of any wrong-doing in connection with the Allison child until I read Dr. Mader's letter.

The two cases of mine referred to by Dr. Mader were private, as was also the Allison child. While the treatment of patients in a public institution constitutes a legitimate subject for criticism, no medical man, claiming to be a gentleman, would pry into *private cases.*

With regard to the Mackenzie case I have to say that she did not have a "fæcal fistula" when she was my patient, nor when she was Dr. Hogan's. The hospital records corroborate this statement. The first entry on the hospital records of any symptom suspicious of a "faecal fistula" is dated about the fifth day of May, 1906, some time after Dr. Mader had begun probing and burning the *sinus* with caustic.

I never accused Dr. Mader, nor do I now, of having punctured Mrs. Mackenzie's bowel with a probe, but Drs. Chisholm and Devine, who assisted him with the operation, swore that he did, and moreover, that the operation for the most part, consisted in puncturing the bowel with a probe and in dilating the hole thus made, and in injecting methyline blue solution through it via the rectum into the pelvic cavity, and in sewing a fold of peritoneum over the opening. (See clinical records and evidence pages 35, 36, 37 and 95).

It is true I never examined the piece of bowel that he speaks about, for the simple reason that he did not give me a chance, and neither did he give Drs.

Chisholm and Devine, although they both had been present and assisted, at the operation and post mortem. They were not given an opportunity to examine the thing, even for the purpose of identification. He reserved the specimen for the sole use of his own witness, and no one knew whose bowel it was except Dr. Mader. No properly constituted court would have admitted in evidence a piece of bowel which had been in the possession of the accused since the patient's death. *The investigation was a private one.* Evidence, page 3.)

Outside of a few medical men who have purposes of their own to serve, I am on friendly relations with my confreres in the city. Can Dr. Mader say as much? I am well aware that these unfriendly few have asked the government to put me off the hospital staff. This, I have no doubt would suit their purpose, but I do not mind them. Now, would Dr. Mader be good enough to tell your readers how many of the members of the Hospital Medical Board want him on the staff, or of the interns, or of the profession in the city.

Such an eminent surgeon as Dr. A. I. Mader would have the profession in Nova Scotia believe himself to be, might reasonably expect to be chosen surgeon-in-chief under the scheme I have proposed.

The only reference to Dr. Mader in my paper on "Hospital Organization" was in connection with the row he had with his chief, Dr. Chisholm, over the Mackenzie case, and to the writ he caused to be issued against him (Dr. C.) for breach of contract and assault. He steered clear of the "contract and assault" business in his letter. He might find time now to give six columns on these subjects Then there was a contract between Dr. Chisholm and himself. The breach of one implies this. Will Dr. Mader be good enough to tell your readers what the contract was for and the terms of it? Whether the position of assistant was offered for sale, and if so, what price was put upon it? Whether the contract was legal, or illegal and against public policy? And whether the whole arrangement was submitted to the Commissioner for approval, including the financial part of it?

No argument that I could use would so conclusively prove the follishness of trying to run the hospital with assistants under the present system of organization, than Dr. A. I. Mader's letter.

Yours, &c.,

N. E. MacKay.

Halifax, N. S.,
February 24, 1909.

[We would suggest to our correspondents that the interchange of unpleasant personalities is neither instructive nor amusing, and does not in the least illuminate the subject of hospital management.—*Eds. M.M.N.*

PERSONALS.

DR. W. H. and Mrs. Eagar returned from London on the 4th instant.

Dr. H V. Kent, of Truro, whose health necessitated a trip to Virginia, has much improved and is expected back this month.

Dr. A. C. Hawkins had the misfortune to fall recently and break two of his ribs. Fortunately he has recovered sufficiently to resume work.

Dr. J. C. MacDonald was elected mayor of Westville at the recent election.

Dr. N. S. Fraser, of St. John's, was recently confined to the house for some weeks from an attack of acute nephritis.

Dr. P. A. McGarry, of Canso, is recovering from a severe attack of pleurisy.

Drs. E. Blackadder and J. S Carruthers have recently been appointed to the Halifax Dispensary staff.

Dr. H. B. Webster has been elected mayor of Kentville by acclamation.

Dr. D. Stewart has been re-elected mayor of Bridgewater, and likewise Dr. J. E. Jones, of Digby, both by acclamation.

Dr. W. D. Murray, of Tangier, has sailed for London to take up post graduate work.

Dr. W. F. Smith, of this city, who recently returned from a prolonged course of study in London, is now attending some of the New York hospitals.

Dr. D. R McRae, of Rawdon, N. S., was married on the 6th ult to Miss Lena McKay, of Boulardarie. The *News* extends its congratulations.

Dr. H. Ross, of Hazel Hill, is doing post graduate work in New York. During his absence Dr. Keay of New Glasgow is looking after his work.

ANNAPOLIS-KINGS MEDICAL SOCIETY.

We regret that we are unable in this issue to find room for the secretary's report. It will appear in the March number of the NEWS.—*Eds. M. M. N.*

A Mediastinal tumour may be present for some time without other symptoms than cough, expectoration, loss of flesh and slight fever—thus simulating pulmonary tuberculosis. A skiagraph will determine the condition; laryngoscopy is also helpful, for adductor paralysis is frequently an early sign.—*American Journal of Surgery.*

Polypi in the ear (as in the nose) indicate diseased bone conditions. Removal of the poly does not prevent recurrence; removal of the diseased bone does.—*American Journal of Surgery.*

Preauricular pain and tenderness points to an enlarged lymphatic gland, a decayed tooth, an affection of the parotid, or a neuralgia of the fifth nerve; auricular tenderness itself indicates some affection of the auricle or the external canal; post-auricular tenderness may be hysterical or indicate mastoid disease.—*American Journal of Surgery.*

EDITORIAL.

II. Cancer.

IF our consideration of the tuberculosis problem as it stands to-day fills us with hope, what is our impression as we rise from a study of cancer?

Next to tuberculosis, this is the most fatal of diseases, and if it does not destroy so many lives, it has features of its own which make it much more appalling. There is, as a rule, not much physical suffering in tuberculosis, rarely anything repulsive; indeed it is a matter of old observation that many of the tuberculous have, in the very insignia of their disease, charms of person and of mind denied to their stronger companions. And the *spes phthisica* keeps many a victim cheerfully oblivious of the rapidly approaching end. But who among us has not felt his heart grow sore within him seeing the agony and horror, the piteous appeal and hopeless despair of those in whom cancer has fixed its talons. The one may truly indulge hope, "consumption is no more incurable," but the only cure for cancer of which we know implies mutilation, and after mutilation, uncertainty.

And there is another ominous fact about cancer; while the mortality from tuberculosis is decreasing, that from cancer is increasing, and increasing rapidly. Yet even here there is hope, a "trembling hope" perhaps, but still hope. If there has never been a time when the campaign against tuberculosis was more active and encouraging than to-day, we can say that the present time sees also the most energetic, determined and scientific attempts to storm the mystery of cancer. A careful survey of the field shows that England leads the way. Six or seven years ago the Imperial Cancer Research Fund was started and through it an enormous amount of work has been done. Liverpool has a Cancer Research Institution of its own. But perhaps the best work of all comes from the Middlesex Hospital, from the wards of the "Cancer Charity" there, in which, for many years, under the terms of its trust, a special study has been made of any remedy, suggested by science or proposed empirically, which may seem justified, and the course of the patients carefully noted.

Some of the most fruitful research comes from America. The work of Gaylord at Buffalo, and that of the Croft Commission on Cancer, of the Harvard Medical School, are most valuable and suggestive.

In Germany we have the inspiring spectacle of Professor Vincent Czerny, to whom surgery owes so much, still in full vigour of mind and body, voluntarily giving up his important and lucrative position as professor of surgery in Heidelberg, and leading consultant and operator in that part of Germany, to preside over and direct the work of cancer research in the Samariter-haús in Heidelberg, which was opened for this purpose two years ago. There is also a French Union for Cancer research. The president is Professor Bouchard, and the object is to organize laboratories and to give subsidies and prizes for research work, especially in etiology, and in the education of the public.

The work accomplished by these various organizations has been on various lines. There has been a careful collection and study of statistics, microscopic investigation, chemical and bio-chemical studies in directions which a few years ago were unknown,

and which have been mainly elaborated in the study of tuberculosis and of immunity, and to a large extent, experimental work in the inoculation of cancer in the lower animals, and a study of the action of serums, vaccines and other organic preparations. As the foundation of a scientific and rational treatment lies in a correct pathology, it is natural and right that the energies of investigators are directed to pathological questions. And there is no point in the pathology of cancer about which such interest centres as that of causation.

For a long time after Virchow declared his axiom *omnis cellula e cellula*, pathologists were divided as regards cancer and tumours in general, into two camps: the "constitutionalists" and the "localists." The leading English text-book on pathology thirty years ago, declared that cancer was unquestionably a constitutional disease, and that surgical operations only removed its external manifestations. But at present the "localists are in." All agree that tumours are primarily local. But we must admit besides a general condition of body favouring the formation of tumours. Is this condition hereditary? This was at one time an almost universal belief, and is still widely held among the laity. But the tendency of investigation, especially during the last thirty years is to cast doubt on any hereditary element. One of the most interesting and valuable contributions to medical science during the past year was the discussion on heredity, with special reference to cancer, tubercle and diseases of the nervous system, in the Royal Society of Medicine in London, last November, and the paper by Dr. Bashford, Director of the Imperial Cancer Research Laboratories, is most interesting. He admits that, from a study of the natural history of cancer in man, and in the vertebrates generally, in which we learn that great variations are shown, as regards the incidence and the type of cancer, even among closely allied species, it is difficult to escape the conclusion that these variations depend on characters which are hereditarily transmissible, and we must be convinced that they have important etiological significance. He indicates two lines on which the question of heredity may be studied, the statistical and the experimental.

The difficulty in statistics is to get thoroughly reliable and complete family histories. In a large series of cases in which the family history was considered trustworthy there was a history of cancer in only fifty per cent., therefore heredity plays no dominant part.

His experimental researches have been carried out mainly on mice, with mouse-carcinoma, the so-called "Jensen tumour," a tumour identical in histology and clinical features, with carcinoma in man. By careful in-breeding of generations of cancerous mice, a "cancerous heredity," granting such a thing exists, can be greatly increased, higher even than fifteen-sixteenths. And up to the present there is not even an indication that, in the mouse, cancer is inherited. Bashford is doubtful if even an adaptability in acquiring cancer can be transmitted, and he says "it is not impossible that can-
" cer may be really a late modification
" of healthy tissue acquired *de novo*
" for each individual and in which
" the bogey of inherited predisposition
" —the dying echo of ancient consti-
" tutional conceptions of cancer as a
" blood disease—plays no part what-
"soever."

Then how is it that individuals vary so much in their susceptibility to cancer? The irritation which in one may

cause cancer, produces in another only a chronic ulcer, and in a third may produce no reaction at all. It is evident that here as in the infections we have two factors, the exciting cause and the predisposing conditions, the seed and the soil. If the constitutional predisposition is not hereditary, how is it acquired? It is held by many that the increasing prevalence of cancer is due to infractions of the laws of health due to our modern methods of living, to the mental stress and strain and the rush of modern life, to errors in diet, especially to the notable increase in a meat diet. Doubtless there are many factors which may influence unfavourably the metabolism of the body. The experimental pathology of recent years gives results which bear on this, and support the views of many clinicians. For one thing it is demonstrated that cancer is primarily circumscribed. Another fact is that the "soil" can be experimentally modified. In the case of the mouse it may be rendered quite unsuitable, or much more suitable for successful transplantation of cancer. Then it would seem that in the early stages of the cancerous growth it is not malignant. The patient may be otherwise in robust health; but later on, dyscrasia appears and there is a secondary modification of the tissues permitting disseminated metastases. And yet another point to consider is the age-incidence of cancer. It is a disease of old age, and of adult life sloping to old age. A disease of senescent tissues.

In healthy normal tissues there would seem to be an active resistance or immunity to the attack of cancer. We have only to reflect on the contrast between cancer and such infections as the streptococcus, in their bearing on accidental wounds or punctures of the surgeon's hands. But this resistance is in some abolished in some way which we do not as yet understand, but which we may hope some day to discover, and let us hope, control.

If there is still much argument *pro* and *con* the intrinsic causes of cancer, the storm-centre of debate hovers over the question of the extrinsic, the direct cause.

The favourite theory of late years is that of a parasitic origin. This is an old theory and it has received support in the recent advance of knowledge in regard to infective disease, with which cancer seems to present many analogies. It also appeals to the imagination. Mr. Butlin, in the Bradshaw lecture for 1905, says with a touch of humour, "The parasite has "been frequently sought for, and, as "everyone knows, has not infrequently "been found. Now it is vegetable, of "the nature of yeast: now, it is ani- "mal, one of the sporozoa; now, it is "a bacillus or bacterium. And again "it is a body of uncertain character "which is sometimes presented to us "under the name of its creator."

But he maintains the parasitic theory, and boldly declares in the title of his lecture, "Cancer is a parasitic disease." He points to important modifications in the views of cancer pathologists, many of whom now agree that in epithelial cancer the theory of derivation from an extension downwards of the normal processes of epidermis cannot be maintained: that the cancer cells are neither transformed into normal cells, nor are they derived from normal cells. And a still more important modification of previous views is that "the growth "of carcinoma depends on the growth "and reproduction of its own proper "cells and does not depend on trans- "formation of the neighbouring cells "into carcinoma cells." This change of view on the histology of cancer and the phenomena revealed in the artifi-

cial cultivation of cancer in mice, as well as his own most thorough study and wide clinical experience, led Mr. Butlin to declare thus strongly for the parasitic theory. Many observers favour this view, not only in the strict sense of parasitism, in which Mr. Butlin uses it, but of infectivity, even of infectivity by contact.

On the other hand, as regards the histological factor. Victor Bonney, of the Middlesex Hospital, in the Hunterian Lectures for 1908, distinctly states that in cancer in the breast "there occurs a progressive conversion of non-malignant epithelium into carcinoma cells." And from the ground of experimental pathology and even of the very experiments which Mr. Butlin takes as proofs of parasitism, Dr. Bashford, of the Imperial Cancer Research laboratory, denies any evidence of parasitism. He says that evidence accumulates that a malignant growth contains nothing foreign to the organism attacked. He shows that inoculation from one species to another has failed, that cancer can be grown continuously only in other individuals of the same species. And he also finds that investigations into the question of metabolism, i. e., the relation of the new growth to its host have shown that these are simply relations of nutrition, an analogy with the relations of the fœtus to its mother. "There "is no evidence of pathological pro-"ducts, toxins, ferments or what not "which *per se* cause ill health. *There "is no analogy with any known form "of infective disease.*"

In the Liverpool Cancer Research laboratory a successful inoculation of mouse carcinoma was made after the tissue implanted had been subjected to the action of liquid air, *i. e.*, a temperature of 319° below zero Fahr. We might suppose that this intense cold would destroy the life of any parasite, and the real exciting agent must be some virus of a chemical nature, indestructible by cold. But it would appear that certain bacteria and some vegetable seeds can survive this temperature.

In any case, whether the *causa causans* be an inorganic irritant or a vital organism acting simply as a parasite, or through irritants evolved in its growth, it is clearly shown by Bonney that in all early carcinomata we can find evidence of a pre-existing inflammatory change. He quotes Waldeyer, who in discussing the etiology of cancer says, "If any "tumours as regards etiology and de-"velopment have relation to inflam-"matory processes, it is the carcino-"mata." Bonney working in the laboratory of the Middlesex Hospital, shows that in all carcinomata malignant epithelial ingrowth in preceded by certain constant changes in the subepithelial tissue, namely, a type of chronic "inflammation characterized "by the presence of plasma cells and "lymphocytes as the chief forms, and "the disappearance of elastin and col-"lagen from the stroma." This is the histological picture of the "pre-cancerous state," a term first used by Hulke and Henry Morris nearly forty years ago, in their studies of cancer in the Middlesex Hospital.

Instances of precancerous state are seen in leukoplakia of the tongue and vulva, warty growths in the lips, in scar tissue, in chronic ulcers, in lupus, and in X-ray carcinoma, and, indeed, according to Moynihan, gall-stone disease is a precancerous state.

The essential lesion in cancer is the penetration of the connective tissue by the cancer cells. The paths of infection are generally regarded as the lymphatics, and the modern operation for cancer of the breast is based on the investigation of Heidenhain, and more

recently by Harold Stiles. A notable contribution to our knowledge of the spread of cancer in the tissues is the work of Sampson Handley. He, too, works in the cancer laboratory of the Middlesex Hospital. In opposition to the general belief that the cancer cells are carried by the lymph stream, he has advanced a new theory, known as the *permeation* theory. His work has been done in mammary carcinoma. He holds that the permeation of the tissues by the cancer cells is neither helped nor hindered by the lymph stream, that it may spread almost as readily against the lymph stream as with it. He thinks the cells of the growing edge of the tumour are simply pressed out into the lymph spaces by the rapid proliferation of the growth and follow the lines of least resistance, just as an injection fluid forced into the subcutaneous tissue would do. In cancer, the driving force is the growth-pressure of active proliferation. Sampson Handley finds that the main plane of permeation is in the fascia and not in the skin, and he is of opinion that very extensive removal of skin, as practised by many operators at the present day, is unnecessary, but he removes the fascia very widely.

During the past year there has been great activity in the testing of various "new remedies" and the renewed trial of some already experimented with and found useless. Some of these have been popular remedies, used in various countries, e. g. violet leaves. Others are chemical agents, essential oils or synthetic products, and some have been prepared from animal tissues. Much was expected of trypsin; it had a fair trial at the Middlesex Hospital, but failed.

A new method of employing electricity is that introduced by de Keating Hart of Marseilles, and known as "fulguration." Prof. Czerny drew attention to it at the German Surgical Congress, but it is apparently to be used only as an adjunct to the knife in advanced cases—or those ordinarily inoperable.

The general impression conveyed by a study of cancer investigation during the last four or five years, is that the cure, when it comes, will be a medical as distinguished from a surgical treatment. But today the only cure we know and can conscientiously recommend is early and thorough removal by the knife. In spite of the sad failures and recurrences, we can recommend and urge operative measures. The improvement in results of operation during the past twenty-five years forms one of the brightest pages in surgery. But as experience accumulates the conviction grows that the key to success is, first, in *early* operation; and, second, in painstaking thoroughness of operation. As regards the first of these considerations much may be done by educating the public. This lies largely in our hands. If we impress upon our patients the vital importance of seeking advice at once, on the discovery of a sore in the mouth, a lump in the breast, or irregular and abnormal uterine discharges, we may indirectly save some lives. In Austria this systematic education of women in the early symptoms of disease has been going on for some time and has been very useful. It is perhaps owing to this that Wertheim gets so many early cases of uterine cancer, so early that with the aid of his thorough method, and unrivalled skill, he can show 60 per cent. of cures. In England a definite plan has been organized for the instruction of the women of the poorer classes, through the agency of midwives.

As regards complete removal, that is the aim of every surgeon, but even in cases which have advanced too far

to hope for complete removal it may be advisable to operate. The removal of a bulky breast may save much suffering from foetid ulceration, even if the glands cannot all be removed. And there are many cases on record to prove that even an incomplete operation appears to have resulted in cure. While as a rule surgical operation in an advanced case, especially if diseased tissue is divided, hastens the progress of the disease, it would seem that occasionally, in some way not understood, the disease has been arrested. And a study of these cases and of the very remarkable, but well-authenticated cases of spontaneous recovery, may throw light on the great question of the healing of this "open sore" of medicine.

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HOSPITAL ORGANIZATION.

THE organization and management of a hospital is a subject of perennial interest and constant discussion and must elicit a wide variety of opinion, as the subject may be viewed from various standpoints. There is the purely scientific view with its demand for the acquisition of pathologican and therapeutic knowledge; the view of the professional staff, who desire favourable conditions for practising their art and who are interested in their patients as fellow-creatures, and not merely "clinical material;" there is the view of the patients themselves, desirous of the best treatment, and, in the case of hospitals which derive their support from the public treasury there is the view of the taxpayer. Finally when, as in Halifax, there is a medical school with more or less definite relations to the hospital there is the point of view of the medical student, and his teachers.

A full consideration of the subject would involve a survey of it from each of these standpoints, but we shall confine our remarks to some observations on the views expressed by Dr. MacKay in a paper which appeared recently in our columns. (*Maritime Medical News*, December, 1908).

Dr. MacKay in his scheme of reorganization of the staff of the Victoria General Hospital advocates the adoption of the continental plan of a Chief of Staff. In each department he would have a chief, who would be supreme in that department and responsible for the work done in it. The system answers well in Germany and has been adopted, with some modifications, in leading American hospitals. It has many advantages and perhaps, from the purely scientific point of view it is the best. We doubt very much if it is best for our conditions here. It, of course, implies continuous service. The duties will vary with the size of the hospital. In a hospital of a thousand beds the work would tax the energies of the strongest man even with a full corps of assistants. In a service of thirty or forty beds, and with a fairly rapid rotation of cases, an average of from one to two hours a day should be sufficient time to enable a visiting physician or surgeon to attend to all cases. We are inclined to think that in any town with a public hospital, practitioners are to be found who would be willing, and indeed glad, to undertake the duties of Physician-in-Chief, or Surgeon-in-Chief, if the demand upon their time did not exceed two hours a day. In the case of the Victoria General Hospital, with from seventy to eighty surgical beds, it is even possible a man might be found, willing, for the sake of the experience, and for the pure love of surgery, to undertake the duties of Surgeon-in-Chief. But this would be a severe strain on the time of the average man in general prac-

tice, and, in Halifax, it is from the general practitioners that the staff must be selected. The question of remuneration, suggested in the quotation from the Superintendent of the Johns Hopkins Hospital, is not likely to be entertained by those who are responsible for the finances of the Victoria General Hospital. Most men with surgical ambitions regard a hospital appointment, with its opportunities of acquiring experience in this branch of work, as ample reward for the time required of them. And if there were too much work for one man it would not be difficult to get another to share it. And if this be so, why should the taxpayer be saddled with the expense of a salaried surgeon?

It would seem more suitable to our circumstances in this Province that the work should be divided, and two or more surgeons appointed. Each would have his own wards and his own staff. There is no reason why two such surgeons should not be on the most friendly terms, consulting and assisting each other in the graver cases, and we think that such an arrangement, with its friendly rivalry, would be better for patient and surgeon than the other.

Dr. MacKay refers to the fact that in the reorganization of the Toronto General Hospital the "ideal plan" of a "chief-of-staff" was not adhered to, but that distinct surgical services with as many chiefs were instituted, each independent of the other, and he thinks such an arrangement "too cumbersome." It is a plan which answers admirably in London, and in Edinburgh, and in all the large hospitals in Britain, and so far as practical results go, these lose nothing in comparison with Germany or the United States. There is another consideration which calls for notice here. If one man were able to undertake all the duties of the position he would soon acquire a skill and experience much greater than his colleagues who had not the advantage of hospital practice, and so far as concerns his own attainments and the welfare of the patients under his care, this would be a great advantage. But we must consider the relation of the hospital to the general community, we must remember the surgical needs of the city and the province. It is generally recognized that a hospital appointment is the reward of merit; the fact that a man is a hospital surgeon marks him as a man of exceptional skill and experience, and, all over the world, the surgeons who are called in in serious cases are hospital surgeons. If we had a Surgeon-in-Chief in the Victoria General Hospital he would be naturally supposed to be the best man available. His colleagues would seek his aid in their surgical cases and the public would demand his services. He would have to respond to calls from all parts of the Province, perhaps requiring two days' absence from the city. This might involve a very serious situation. An emergency might arise, a valuable life might be in jeopardy and the man best qualified to act, not available. The surgeon himself might be temporarily incapacitated. Prudence demands better conditions than this. It is an old proverb that we should have two strings to our bow. And for this reason we think it unwise to hand over all the surgery in the hospital to one man. Indeed, when we consider the amount of operative work at the hospital, and the population of the city and province, and the increasing demand for surgical treatment, it would be apparently a wiser course to have four surgeons in attendance, as at present, than to depend on one only.

As regards tenure of service, we agree with Dr. MacKay that a continuous service is better than the interrupted plan, which obtains in our hospital. First, from the patients point of view. As matters stand now there is a change every six months, and patients who have been under the care of one doctor pass into the hands of another. No one cares to swap horses when crossing a stream. Secondly, from the doctor's point of view. When he comes on duty he takes up the treatment of many patients who have been under the care of another: it is impossible not to feel in some cases a good deal of responsibility or anxiety. Then, when his term is at an end, he has to leave patients in whom he is interested and whose course he would like to follow. Arrangements may of course be made by mutual consent, whereby the outgoing physician or surgeon may continue to have the oversight of any special case as long as he may wish. But any such arrangement has its disadvantages. In selecting one or two patients for his continued care he might not only be regarded as unjustly partial by the rest of the ward patients, but would seem to show a want of confidence in the skill or the *bona fides* of his successor. If he made his visit at the regular hour, he would be interfering with his colleague's visit, and if he chose another hour, he would interrupt the routine of the house-staff. But it is chiefly to the earnest scientific physician or surgeon that the interrupted system seems defective. His opportunities for observation and study of disease are abruptly interrupted and this is not the most favourable condition for scientific work.

But in considering these questions we must bear in mind our environment, and the concrete case before us, the particular case of the Victoria General Hospital. Here, as is pointed out by Dr. McKay, the visiting physicians and surgeons are general practitioners, and if the exigencies of practice make it difficult or inadvisable to undertake continuous duty for a term of years, we must fall back on an interrupted system. And in this case the six months term is probably the best. We think Dr. McKay is going too far when he calls it a bad system. No system which permits of such splendid results as regards scientific medicine or the welfare of the sick, as those obtained in the Montreal General Hospital, or the old and renowned Massachusetts General Hospital, can be considered a bad system. It may not be the best, but half-a-loaf is better than no bread, and if the conditions here do not permit of a continuous service, we must make the best of what we have, as they do with brilliant success in other places.

Dr. McKay is on delicate ground when he treats of the qualifications of the hospital staff. He states that under the present system no other qualification is required than to have one's name on the Medical Register: that "before being made a full surgeon and invested with power to engage in abdominal surgery, it is not necessary for the appointee to have even amputated a finger." Dr. McKay seems to forget the fact that the youth of twenty-one years of age, who has, it may be, never made an incision or sutured a wound in living flesh, but who has his diploma in his desk, and his name on the Register, is legally qualified to undertake any operation in surgery. And he also forgets that the self-regulating mechanism of common sense comes into play. A patient, thoughtful of his own life, and a young man careful for his own reputation are factors which would

prevent a surgeon from beginning his career by extirpating the Gasserian ganglion. And no authority responsible for the success of a hospital would appoint to their staff a totally inexperienced man. But we recognize the fact that it may be much more difficult to select a surgeon than a physician. Any practitioner, who has been for, let us say, ten or fifteen years in active practice, who has gained the esteem and confidence of his colleagues, as an upright, sagacious and successful physician, should, we hold, be eligible for the position of a hospital physician. But to be a hospital surgeon a practitioner should certainly have more experience of surgery than the average practice would yield in the same number of years.

Surgery, as Dr. McKay truly remarks, is not now what it was twenty-five years ago. The enormous advance in surgery has practically made it a speciality. It is not so many years ago that the surgeon to a hospital had also charge of diseases of the eye and of the skin. Advances in knowledge have evolved the oculist and the dermatologist. An improved technique, better methods of controlling haemorrhage, and surer methods of treating wounds have made it possible for the man in general practice to do a great deal of surgery successfully, which some years ago was regarded as the province of the pure surgeon. But the same advance in knowledge has brought into being a whole new world of surgery, in many departments of which special skill of a high order is required, and a surgeon to be successful, from the patient's standpoint, must be in steady practice.

It would be doubtless a very good thing for the patients if the surgeon were, as Dr. McKay demands, a specialist. But, as he himself points out, the staff of our hospital is recruited from men in general practice. Questions of finance forbid the importation of a highly trained specialist. We must depend on our own resources and there is only one way in which we can secure for the position of surgeon men who shall have more than the average skill and experience of the every-day practitioner. This is by the judicious selection and employment of assistants, and we consider the recommendations of the Medical Board of the hospital on this point are upon the whole very good.

In the appointment of assistants we hold that the chief defect in the organization of the Victoria General Hospiatl has been corrected. And as regards the gentlemen appointed to these assistantships we believe the government has selected men of marked ability, well qualified to undertake surgical work. Provision is at last made for a constant succession of men with special surgical training and experience to take up the work of their seniors when they must lay it down.

There is no hospital, anywhere, however well managed and equipped, against which, from time to time, complaints are not made, and the great majority of such complaints are ill-founded.

It is our sincere desire that the beneficent services of the Victoria General Hospital may be still further perfected and extended, and in concluding these remarks we wish to state it as our conviction that if the management were entrusted to a Board of Governors or Directors, chosen from among our leading citizens, representative of all classes and independent of party politics, men who would count it an honour to serve the interests of this great charity, and who would act willingly and gladly without any pecuniary remuneration, the hospital would gain immensely in efficiency and in public esteem.

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L. Vernon Briggs, M. D., Boston, Mass., Boston Med. and Surg. Journ, April 19, April 26, May 3, 1908.

J. C. Montgomery, M. D., Charlotte, N. C., Charlotte Med. Jour., March, 1897.

W. R. Blackwood, M. D., Philadelphia, Pa., Medical Summary, March, 1905

Prof B. S. Arnulphy, M. D., Paris, France. The Clinique, Sept., 1897.

David Walsh, M. D., London, Med. Press and Circular, London, Jan. 4, 1905.

Seth Scott Bishop, B. S., M. D., D. C. L., LL. D., Chicago, Ill.

M. E. Chartier, M D., Faculty of Paris, France, June 12, 1904.

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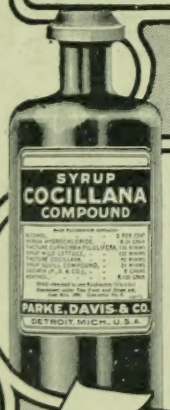

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